

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Greenskies Clean Energy, LLC petition for a declaratory ruling for the proposed construction, maintenance and operation of a 3.0-megawatt-AC solar photovoltaic electric generating facility on two parcels at the Elmridge Golf Course located to the east and west of North Anguilla Road at the intersection with Elmridge Road, Stonington, Connecticut

Petition No. 1410

August 20, 2020

GREENSKIES CLEAN ENERGY, LLC'S RESPONSES TO THE AUGUST 6, 2020 SET OF INTERROGATORIES DIRECTED TO GREENSKIES CLEAN ENERGY, LLC FROM DOUGLAS HANSON

Petitioner Greenskies Clean Energy, LLC ("GCE" or "Petitioner") hereby submits the following responses to the Interrogatories that were directed to GCE by Douglas Hanson on August 6, 2020.

1. *What specific type of panel modules are going to be used in the Project?*

Currently, the proposed solar panels to be installed at the facility are Canadian Solar 395 W BiHiKu Super High Power Bifacial modules. Depending on timing of required project approvals, advances in industry technology and product availability, confirmation of selected modules or final selection of a comparable module will occur at a later date. This is a common practice in development of solar energy facilities.

2. *What specific type of inverters are going to be used in the Project?*

The selected inverters to be used in the Project are Solectria XGI 1500-125/125 string inverters, as noted in the electrical drawings provided in Appendix B of Petition #1410.

3. *Do the proposed panels to be used contain lead, arsenic, selenium, cadmium, PFAS, or other hazardous materials or heavy metals? Do you have leaching studies for the panels?*

The selected panel and comparable models are primarily comprised of glass, silicon and aluminum. The main components are: mono- or polycrystalline silicon solar photovoltaic (PV) cells; toughened, tempered glass with an anti-reflective,

textured surface; aluminum frame and encapsulation layer used to hold the cells in position during fabrication. The proposed model panel is bifacial and, therefore, does not contain a back sheet. All layers of materials are contained and sealed within the glass panels. A junction box containing diodes and connectors is also part of the panel.

Greenskies contacted the manufacturer to inquire about materials and components of the selected panel/module and comparable models. As confirmed by Canadian Solar, the selected modules and/or comparable products DO NOT contain PFAS or its derivatives. Such chemicals are not used in the manufacture of any Canadian Solar modules or the selected module type. According to a company representative, PFAS are only used in plastics that might be contained in some flexible modules, which the proposed (and comparable) panels are not. Exhibit A contains correspondence.

In addition, and according to Canadian Solar, selenium, cadmium, arsenic or heavy metals (other than lead) are not contained within the selected or comparable modules. Lead is present in soldering paste, typically used to connect cells together within the panel. Using the USEPA Toxicity Characteristics Leaching Procedure (TCLP) for sample preparation, Canadian Solar had solar panels analyzed for a full range of organic and inorganic compounds. TCLP is an extraction method for chemical analysis employed as a method to simulate leaching through a landfill from a module/panel that has been crushed, compacted and/or pulverized, not from normal operating conditions or anticipated, potential accidents such as storm damage. Results showed one detection of Lead, below the Maximum Contaminant Level for drinking water. All other results were “non-detects.” The toxicity report is provided as Exhibit B.

In addition, the selected panels and comparable models are UL1703 certified. The UL 1703 Standard for Flat-Plate Photovoltaic Modules and Panels is the industry standard for safety and performance. It is not only the gold standard for safety in the U.S, it's the basis for the IEC 61730 document, which is the international safety standard. To receive this certification a comprehensive testing protocol is implemented for components and materials in everything from the frame and junction box to the connectors and wiring. Such testing includes temperature, corrosivity, degradation and breakdown during normal operating conditions, as well as testing for exposure to rain and water.

4. *Did the petitioner consider the solar panels to be impervious in calculating peak rate and water quality volume? Please explain that decision*

Peak flows were determined based on an overall “step down” condition of the hydrologic soil groups within the footprint of the site. The most recent draft of

guidance (January 2020), sometimes referred to as “Appendix I” of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities stipulates this approach for peak flow assessment rather than considering the impervious area of the panels. The step-down approach generally yields more conservative results versus using the impervious area of the panels. Water quality volume (WQV) was calculated based on the impervious area of the equipment pads and gravel roads. The effective impervious area of the panels does not need to be considered for WQV for this site since the design meets the criteria of CT DEEP Appendix I, Design and Construction Requirements, paragraph (1). See response to interrogatory #39, below.

5. *Why was no noise survey or modeling analysis submitted with this petition, given the proximity of residential homes to the site?*

As is standard practice in the development of solar energy facilities, Petitioner conducted a preliminary analysis of potential noise receptors within both Project areas. The Project’s civil engineer/environmental consultant provided Petitioner measurements from proposed Project equipment to residential property lines along Elm Ridge Rd, North Anguilla Rd., Woodland Court and Fairway Court. Based on the distances from the proposed Project equipment to property lines of these residences, coupled with the noise ratings of specified equipment, Petitioner, in consultation with their engineer/consultant, determined further noise modeling would not be necessary. See Petition #1410, Section 6.3.3.

In addition, in response to CT Siting Council interrogatory 19, Petitioner utilized standard industry formulas to provide general noise attenuation estimates and distances to support the conclusion that noise levels attributable to the Proposed project at the property line nearest the West Project area are expected to be well below CT DEEP Noise Limits for Residential Areas and Other Sensitive Areas.

6. *What is the current background noise level day and night in the surrounding area? What will the increase be should this project be built?*

Since Petitioner utilized standard, desktop noise analysis and screening methodology, a field study was not conducted.

7. *Who drafted petitioner’s response to #19 of the Council’s first set of interrogatories, with respect to noise issues? What qualifications does that individual possess to opine on noise projections and measurements?*

Petitioner’s development staff drafted the response to the Council’s interrogatory 19, as noted above, using standard desktop noise analysis and screening methodology. Greenskies Development team staff have extensive experience in

electrical engineering, land use planning, environmental impact analysis, environmental and land use law, as well as environmental consulting/hazardous waste remediation.

8. *Provide the noise emitting specifications for the specific type of panel modules/inverters that will be used in the Project.*

The panels/modules do not emit noise and, therefore, manufacturer's equipment specifications do not provide noise generation ratings. The selected inverters or comparable models are typically rated to generate 55 dBA at a distance of 3.0 meters or 9.8 feet from the operating inverter. The electrical equipment specifications are provided in Appendix B of Petition #1410.

9. *Identify "all other selected systems equipment" as that is means in Section 6.3.2 of the Petition.*

Selected system equipment to be placed on the pad includes a transformer, an AC combiner and low voltage data acquisition system (DAS) and telemetry equipment, if specified by the utility. The specified transformer (and/or comparable model) has a sound emission rating of 58 – 62 dB at the source. The AC combiner and other noted, potential low voltage equipment are not rated for noise because they do not generate noise.

10. *Identify any efforts made by Petitioner to conduct a noise study/evaluation, or otherwise measure the expected noise emitted from the Project to the property located at 6 Woodland Court (the "Property") and/or other neighboring parcels, and identify the expected noise to be generated from the Project to the Property and/or neighboring parcels. For any such noise study/evaluation, identify the specific type of panel module and inverters that were considered.*

See the responses to interrogatories 5 through 7 above.

In addition, as noted in Petitioner's response 19 to the Council's Interrogatory Set 1, Petitioner performed a desktop noise analysis using the ISO 9613 Standard for "Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation" and the inverse square law. Sound propagation on a site depends on several factors, including, ground cover, terrain, and the presence of existing vegetation/trees and intervening objects (e.g., fences, structures). Assuming a relatively hard and flat ground cover (such as pavement, packed dirt, or water), sound from stationary sources generally reduces six (6) dBA per doubling of distance. Assuming flat ground with a softer ground cover (e.g., grass), sound reduces approximately 7.5 dBA per doubling of distance.

As noted in Subsection 6.3.2 (p. 23) of the Petition, equipment located on the West Project Area pad will typically generate 55 dBA at a distance of three (3) meters (or 9.8 feet). The closest equipment pad to the nearest residential property line (i.e., 139 N. Anguilla Rd.) is 204 feet. In accordance with the general formula presented above, that equipment is expected to generate 47.5+/- dBA at 20 feet; 40+/- dBA at 40 feet; 32.5+/- dBA at 80 feet; and, 25+/- dBA at 160 feet. Using the inverse square law and calculator to estimate sound levels, this translates to 28.8 dB at a distance of 204 feet. Intervening cover will consist of soft vegetation/meadow and a stretch of gravel access road; there will also be an intervening, slatted fence and existing mature trees between the source and property line—thereby further mitigating noise effects.

The residential property lines of the nearest parcels on Woodland Ct. are 868 ft. and 700 ft. from the closest equipment pad, 190 feet from the fence line, and 217 feet from the first row of panels. The residential property lines of the nearest parcels on Fairway Ct. are 783 ft. and 1,045 ft. from the closest equipment pad, 380 feet from the nearest fence line and 450 feet from the nearest panel. The Council did not ask Petitioner to provide additional noise modeling analysis for the East Project area.

11. *On what basis does Greenskies conclude that “the proposed Project is expected to have no adverse noise-related impact on the surrounding area?”*

As noted in responses to interrogatories 5 through 10 above, based on Petitioner’s analysis of potential noise receptors within both project areas, distance from proposed Project equipment to residential property lines, and results of desktop noise analysis and screening using standard, industry-accepted methodology, noise generated by the Proposed project is expected to be well below CT DEEP Noise Limits for Residential Areas and Other Sensitive Areas.

a. *Were tests conducted and reports of those tests generated?*

Based on results of initial analysis and screening, no field studies or high level noise modeling have been conducted to date.

b. *If so, please identify them.*

No response required.

12. *On what basis does Greenskies conclude, through its Petition, that “any sound generated by the equipment located at the pads is expected to be attenuated by distance [...] and will not be detectable beyond the Project parcel”?*

- a. *Identify any tests, simulations or other studies, upon which this conclusion is based, all reports or memorandums or other documentation prepared of the results of such tests, and the preparer thereof.*

As noted above in responses to interrogatories 5 through 11 above, based on Petitioner's analysis of potential noise receptors within both project areas, distance from proposed Project equipment to residential property lines, and results of desktop noise analysis and screening using standard, industry-accepted methodology, noise generated by the Proposed project is expected to be well below CT DEEP Noise Limits for Residential Areas and Other Sensitive Areas.

13. *What efforts have been undertaken to ascertain whether PFAS or other potentially hazardous materials will leach into the groundwater and impact water quality for public and private wells. Please describe in detail the results of the same?*

Please see response to interrogatory 3 above.

14. *What efforts have been made to ascertain whether PFAS or other potentially hazardous materials could cause environmental disruption to the project area and/or neighboring parcels?*

Greenskies contacted the manufacturer to inquire about materials and components of the selected panel/module and comparable models. As confirmed by Canadian Solar, the selected modules and/or comparable products do not contain PFAS or its derivatives. Such chemicals are not used in the manufacture of any Canadian Solar modules or the selected module type. According to a company representative, PFAS are only used in plastics that might be contained in some flexible modules, which the proposed (and comparable) panels are not.

15. *What efforts have been made to study and mitigate the visibility of the solar panels from various levels and elevations of the Property at 6 Woodland Court?*

As a good will gesture, Petitioner/GCE chose to assess private views from abutting properties, which are not part of the public view sheds within the Project's surrounding area. As part of this effort, Petitioner selected parcels at 5 and 6 Woodland Ct. for a visual simulation from the rear property line at ground level. To avoid trespassing on private property, photos were taken on the golf course side of the property line, in front of existing vegetation, which provides additional screening from within those properties. Petitioner did not perform visual simulations of Mr. Hanson's view from windows at various stories of his residence.

16. Did you consider a project array and/or layout on the western portion of the Elm Ridge Golf Course property prior to submitting the current Petition?

The West Project area off N. Anguilla Rd. IS the western portion of the golf course. Petitioner has not considered utilizing the land north of Elm Ridge Road since it is not available to lease.

- a. If the answer to the foregoing is in the affirmative, please describe that alternative in detail and the reason(s) for rejecting it in favor of the current proposal.*

No response is required.

17. What alternative project layouts have been considered, and would any of those layouts or locations mitigate visibility of the solar panel array from adjacent residential properties?

The only alternative layout included 2 MWs (AC) on the West Project area off North Anguilla Road and 1 MW (AC) on the east side of North Anguilla Road.

- a. If so, why were those sites or layouts not selected?*

Due to delineated wetlands to the south and west on the West Project parcel and associated 100-foot upland buffer/setback area, the layout was revised to locate 1 MW AC on the West Project parcel and 2 MWs AC on the East Project parcel.

18. What impact, if any did the location of the existing power lines have on your proposed project layout?

The location of the existing three-phase lines running along Elm Ridge Rd. and N. Anguilla Rd. informed the design of the interconnection route for each Project area, however, the layout of each facility was not determined by the location of these lines.

19. Describe in detail how the proposed Facility will be cleaned, or otherwise cleared of debris, animal droppings, snow (and other elements), and vegetation. Please include in your response, without limitation:

- a. The frequency of any such cleaning and maintenance;*
b. A description of equipment that will be used for any such cleaning/maintenance.

Due to regular precipitation and weather patterns in the Northeast, modules typically do not require regular cleaning. If, however, an unforeseen incident

or event were to occur that would make cleaning necessary, Petitioner would only use water for such cleaning purposes. Water would be provided in vehicle mounted containers and distributed with a hose or sprayer. No chemicals would be used during this process.

20. The Petition provides that “the southern end of the East Project area will be most visible from the property lines at 5 and 6 Woodland Ct. [. . .]” and that these “are the closest to the proposed project. The view is somewhat restricted from within the properties by existing mature trees and understory vegetation during the growing season.”

- a. Does the petitioner acknowledge that the view of the project will not be restricted from these properties during those seasons where vegetation is not blossoming, such as fall and winter?*

Petitioner acknowledges that there is variation in natural screening from season to season depending on climatic conditions, composition of vegetation and nature of growth throughout the year. The views photographed for the visibility assessment were documented in early Spring, before trees and understory vegetation had “leafed out” in the growing season.

- b. Describe with specificity the elevation from which the Petitioner viewed the property from 5 and 6 Woodland Ct in order to offer this conclusory statement.*

Petitioner documented the views to/from 5 and 6 Woodland Ct., at the property line and at the same grade as the proposed solar array. Visual impacts consider the line of site at eye level at the approximate elevation of the neighboring properties.

21. Describe in detail the “landscape plan,” contemplated in Section 6.12.3 of the Petition, as it relates to mitigating the visibility of the project from the property located at 6 Woodland Court, including whether any portion of the panels, array, or related facilities will be visible from various elevations or level of property.

The landscape buffer along the southerly end of the array is intended to screen the visibility of the panels and components from eye level at the neighboring residences and once vegetation reaches maturity. The buffer will include a shrub hedge with mixed, native evergreen and deciduous plantings.

Plants were chosen for their ability to screen all times of the year and also be aesthetically pleasing while easy to maintain. The planting plan shows a mixture of evergreen shrubs and native, dense, deciduous shrubs that will provide the best possible coverage at strategic locations. Careful attention is paid to plant height especially along the south end of the solar facility. The spruce trees and large shrubs are far away enough to not block solar array light even at maturity.

Every effort was made to select the appropriate plant for the specified locations, keeping in mind solar aspect and pertinent screening needs. A mixture of heights and plant textures will provide interest, biodiversity, and dimension to the buffer instead of a singular species which can be homogeneous and challenging due to pests and various environmental factors.

See attached Exhibit C for plant material board for selections in varying seasons for more information.

The buffer does not screen the facility from significantly higher elevations. See response to interrogatory 35, below, for more detail on required screening.

22. What process, if any, was used to determine how waterflow would or would not be more greatly diverted toward 5 or 6 Woodland Ct?

Based on project civil engineer's review of existing LIDAR topography and survey data, the existing terrain within the array field slopes west, northwest, away from 5 and 6 Woodland Ct. Consequently, runoff flows westerly towards the wooded area adjacent North Anguilla Road. Since existing grades will be retained, overall drainage patterns will not change as a result of this project and as such runoff will continue to drain towards the wooded area east of North Anguilla Road.

23. Was any work performed or assessment made of the impact to the view of the owners at 5 and 6 Woodland Ct., with regard to visibility of the panels from various levels of their homes? If not, explain why.

As noted above in response to interrogatory 15 above, as a good will gesture, Petitioner selected parcels at 5 and 6 Woodland Ct. for a visual simulation from the rear property line at ground level. To avoid trespassing on private property, photos were taken on the golf course side of the property line, in front of existing vegetation, which provides additional screening from within those properties. Petitioner did not perform visual simulations of each resident's view from windows at various stories of their residences. Petitioner followed general land use planning principles/guidelines, as well as local zoning regulations, which do not typically require screening of development from upper stories of buildings.

24. Which corporate entity ultimately will receive the incentive monies from the State of Connecticut that are associated with this project?

Petitioner objects to this interrogatory on the grounds that it exceeds the scope of a Siting Council petition proceeding held pursuant to Conn. Gen. Stat. § 16-50k. Subject to the foregoing objection, Greenskies Clean Energy LLC (GCE) will be the owner of the project. As of now, no incentives will be received from the State of Connecticut. However, for the sake of completeness, it should be noted that the Project won a competitive RFP process and was selected by Eversource to receive a Zero Emission Renewable Energy Credit (ZREC) contract for fifteen years.

25. Section 3.1.3 of the Petition refers to potential alternative site, please identify which alternate site(s) or project layout(s) were “investigated” and describe the extent of such investigation(s) in detail.

Petitioner/GCE studies hundreds of sites annually to determine their feasibility while taking into account state and federal regulations, as well as impact to environment and communities, suitability for interconnection, and constructability. Sites that pass GCE’s internal review are then submitted into the state wide ZREC auction administered by Eversource. Alternative sites that passed our internal review but were not selected by Eversource include projects in the towns of East Windsor, Lebanon, Haddam, Mystic, and Monroe.

26. State whether an arrangement of arrays that would be of equal production to the current proposed arrays is possible within other areas of the Project Site that would affect the visual and audible impact upon the Property to a less extent than under its current configuration.

If the response to this interrogatory is in the affirmative please describe the alternative arrangement(s) and the reason(s) for proceeding with the presently proposed array arrangement.

Petitioner objects to this interrogatory in that it presumes that there is “visual and audible impact,” which Petitioner specifically denies. Subject to the foregoing objection, Petitioner states that there are no other feasible layouts for the proposed system within the available lease area.

27. Section 3.5 of the Petition states that “ongoing site maintenance activities will occur regularly,” at the Project Site. Describe those activities in detail and the projected schedule and frequency of such activities.

Operations & Maintenance information is provided in Appendix C of Petition #1410. As noted in the Visual-Mechanical Checklist for Annual Preventative Maintenance & Emergency Response Plan, the following, various activities occur

annually: 1. Monitoring System Data Review; 2. General Site Inspection; 3 Mechanical System Inspection (Racking, Modules); 4. DC & AC Electrical System Inspection (DC Collection Panels, AC Collection Panels, Safety Disconnect Switches); 5. Inverter Inspection; 6. Stormwater Management System Inspection; 7 Data Acquisition System Inspection and 8. Reporting. Based on findings and observations, corrective repairs are implemented. This work is typically conducted by two individuals and hand-held tools.

In addition, Stormwater inspections and monitoring are completed in accordance with the General Permit. GCE also works with Data Acquisition Services (DAS) and syncs data with their custom in-house 24/7 monitoring platform, so that issues can be identified in real time and addressed, as needed.

28. On Page 19 of the Petition, you indicate that you reached out to abutters to address and speak to their concerns, and reference the “relevant correspondence” in Appendix K. However, upon review of Appendix K, only the letters from Greenskies are included. Please provide all further correspondence with the abutting neighbors.

As noted in the Section 5.0 of Petition #1410, as a courtesy, on April 20, 2020, Petitioner sent an informational letter to select neighbors/abutters whom Petitioner believed would have the greatest concerns regarding potential visual impact. In the letter, Petitioner provided an overview of the project and attached a map showing the boundary of the proposed project areas. Contact information was provided as well, and Petitioner offered to speak with and address any concerns they might have. Responses were received via phone and email from residents of 6 Woodland Court (Douglas Hanson), 5 Fairway Court (MaryAnn McComiskey) and 153 N. Anguilla Rd. (Randall Miner, who also owns rental properties at 139, 143 and 175-177 N. Anguilla Rd.). Petitioner spoke with all three neighbors and explained this outreach was out of courtesy so that Petitioner could obtain feedback and try their best to address any concerns during the planning and permitting process. Petitioner explained this is a locally exempt project subject to CT Siting Council authority/jurisdiction. Based on these conversations, key concerns were identified as: visibility of the project from their property and possibility of depreciating property values. As a follow-up to the calls, Petitioner scheduled meetings with the Woodland Ct. and N. Anguilla Rd. landowners.

On April 28, Ms. McComiskey emailed Petitioner, expressed opposition to the project as proposed, communicated concerns about the proximity of the project to residences in their neighborhood and informed Petitioner she notified the High Ridge Homeowners’ Association. On April 29, Petitioner responded to the email and attempted to confirm Ms. McClomiskey’s primary concerns are visibility of the

project and perceived impact to property values. Petitioner provided a fact sheet to provide perspective on the concern about property values, as well as a link to information addressing various, typical concerns neighbors have around these types of projects, including electromagnetic fields, raised by Ms. McComiskey. Petitioner offered options for meeting – outdoors, in very small groups and properly distanced with personal protective equipment. Petitioner also asked that she provide specific concerns so we could address and let her know we would like to continue the conversation and involve her and other neighbors in landscape planning and screening. Petitioner received no response. See Exhibit D for correspondence.

On May 6th, after placing the boundary flags around the perimeter of both project areas, Petitioner and project engineer met with Randall and Lydia Miner (N. Anguilla Rd.) and Douglas Hanson (Woodland Court). Petitioner did not request a meeting with Ms. McComiskey, since Petitioner did not receive a response from her. While meeting with the Miners, Petitioner attempted to share facts about the project design and boundary marking. Petitioner took some photos toward the proposed West project area from the yards of #139, #143 and #153 and offered to review and analyze the same. Petitioner attempted to discuss possible screening options along the Miners' property line; they chose to not engage in this conversation.

The afternoon of May 6th, Petitioner's staff received two voice messages from Rachel Miner Dyer, daughter of the Miners and tenant/resident of what Petitioner believes is a home located at 175-177 N. Anguilla Rd. Ms. Miner Dyer informed Petitioner she plans to take legal action against the project. Petitioner reached out to Ms. Miner Dyer on May 8, thanked her for the messages informing them of her intentions, offered to engage her to better understand her specific concerns, and let her know Petitioner would be following proper regulatory procedure for the project. Ms. Miner Dyer responded that the community has decided to pursue legal action.

On May 6th, after meeting with the Miners, Petitioner and the project engineer met with Doug Hanson of 6 Woodland Court. As the owner of one of the two residences south of the East Project area, Mr. Hanson appeared to appreciate the opportunity to review the current site plan/layout and landscape plan, along with draft visual simulations, and asked many technical questions about the project. Petitioner let the residents of 5 Fairway Court know the flags would be up until the next day so they could review the same from their property. Based on various communications and meetings with these landowners, key concerns were identified to be: visibility

of the project from their property, possibility of depreciating property values and rental income, noise and electromagnetic fields.

29. On Page 24 of the Petition, you state that “[a]ny sound generated by the equipment located at the pads is expected to be attenuated by distance, slatted fence and existing vegetation and will not be detectable beyond the Project parcel.”

a. Provide any substantiation of this claim.

See responses to interrogatories 5 through 12 above.

b. Was a noise study conducted?

A desktop analysis was completed of noise levels and propagation to site boundaries. A 3rd party simulation has not been completed, as noted above in response to interrogatory 12.a above.

c. If yes, describe the parameters of the study itself, the result and describe in detail the findings of such study and a copy of the same.

No response required.

d. If no, then explain why, with so many homes in close proximity to the Project Site, a study was not conducted.

See responses to interrogatories 5 through 12 above. As noted above in response to interrogatory 12.a above, based on Petitioner’s analysis of potential noise receptors within both project areas, distance from proposed Project equipment to residential property lines, and results of desktop noise analysis and screening using standard, industry-accepted methodology, noise generated by the Proposed project is expected to be well below CT DEEP Noise Limits for Residential Areas and Other Sensitive Areas.

30. Is it your expectation that the council will approve this project without the benefit of a full specification for the equipment to be used?

Petitioner objects to this interrogatory in that it calls for a legal conclusion and calls for speculation. As such, no response is required.

31. Is it your expectation that the council will approve this project without the benefit of an actual noise modeling analysis?

Petitioner objects to this interrogatory in that it calls for a legal conclusion and calls for speculation. As such, no response is required.

32. Do you believe it valuable for the public to have a chance to openly ask questions regarding this project at a public hearing?

Petitioner objects to this interrogatory in that it is vague, misstates the public hearing process and procedures utilized by the Siting Council, and is irrelevant, since the Petitioner is hard-pressed to conceive of any instance in which the Council would be guided by Petitioner's beliefs regarding public hearings. Subject to the foregoing objection, Petitioner states that Petitioner believes in the Council's process, guidelines and regulations with regard to public involvement. Petitioner also believes that public opportunity to comment is valuable. That is why Petitioner has not objected in any way to the various requests for public hearing that have been made in this Petition.

Moreover, the purpose of Petitioner's efforts to engage neighbors early on in the process was to provide such an opportunity. Those neighbors with whom Petitioner had early communications chose to not further engage in conversation with the Petitioner.

Petitioner was asked to participate in the June 30th, 2020, Planning & Zoning Commission meeting by providing an overview of the proposed Project. Petitioner's project civil engineer, as well as Greenskies' Vice President of Land Acquisition, were available to respond to the Commission's, as well as the public's questions and comments. As a result of this meeting, the Commission prepared and submitted to the Council a comprehensive letter expressing their concerns about the proposed Project. This letter incorporated those issues and concerns raised by the public at the June 30th meeting. In addition, the Commission included review comments provided by the Town's engineering consultant.

33. Appendix M of the Petition provides ground-view only visibility of the view assessment. The homes that abut the Project site consist of multi-story homes. Why were drones not utilized to provide an accurate depiction of what homeowners that abut the project would actually view from their home?

As noted above in responses to interrogatories 15 and 23 above, as a good will gesture, Petitioner selected parcels at 5 and 6 Woodland Ct. for a visual simulation from the rear property line at ground level. To avoid trespassing on private property, photos were taken on the golf course side of the property line, in front of existing vegetation, which provides additional screening from within those properties.

Petitioner did not perform visual simulations of each resident's view from windows at various stories of their residences. Petitioner followed general land use planning

principles/guidelines, as well as local zoning regulations, which do not typically require screening of development from upper stories of buildings. Views from higher elevations such as a second story from a residence typically are not considered given that it is impractical to screen from significantly higher elevations given the height of plantings, fence, or physical barrier that would be required.

In addition, Petitioner is not legally authorized to fly drones over private property for numerous reasons.

34. Do you consider it a material change in the visual aesthetic of the perspective of the home-owner at 6 Woodland Court in what that homeowner will be forced to look at after the project is completed?

Petitioner objects to this interrogatory in that it is irrelevant, calls for speculation, is vague in that the terms “material change” and “visual aesthetic” are undefined, and it presumes that a material change will occur. Moreover, Petitioner cannot possibly know the perspective of a nearby homeowner. As such, no response is required.

a. Explain how you came up with your response.

No response is required.

35. On page 39 of the Petition, you state, “the East Project will be visible from these property from a great distance.”

a. Provide your definition of “great distance,”

b. Provide how you arrived at this definition

The proposed Project design is not required to comply with local zoning. However, Petitioner reviewed and considered Town of Stonington zoning provisions, including setbacks, buffer and screening requirements for the RR-80 zoning district, within which the East Project area is located. These provisions are designed to protect abutting uses and set reasonable standards for development.

The required rear and front yard setbacks for development in the RR-80 district is 50 feet and the maximum height is 30 feet, which is about three stories. Buffer requirements for duplex housing, trailer parks and community facilities (all permitted/“as of right” uses) is 50 feet with 30 feet of screening. In addition, the zoning ordinance definition of “screen” or “screening” is “Dense vegetation or other landscape materials, or a combination thereof, which provide effective year-round visibility insulation from adjacent property for a minimum of six feet in height.”

Setbacks in the East array area include a front yard of 180 – 200+/- ft. and a rear yard of 180 +/- ft. to the perimeter fence and 217 feet to the first row of panels. The height of proposed project is less than 10 feet and proposed screening includes a 7-foot fence with 20 – 30 feet of landscaping in front of it.

Based on local zoning provisions designed to protect *abutting* uses, it is the Petitioner's opinion that distances of 380 feet, 450 feet, 750 feet and > 800 feet from non-abutting parcels can reasonably be considered "great distances."

36. State whether the Petitioner contacted the Elm Ridge Golf Course property owner(s) regarding the proposed project or whether the property owner(s) contacted the Petitioner to undertake the current project.

Petitioner objects to this interrogatory in that it is irrelevant and seeks information that is beyond the scope of a petition brought pursuant Conn. Gen. Stat. 16-50k. As such, no response is required.

a. Please state the date of the initial communications(s) between the Petitioner and the property owner(s).

No response is required.

b. Please identify the individuals who were party to the initial communications.

No response is required.

c. Please state whether the Petitioner or the property owner(s) made the final decision on the layout and location of the project site, and state in detail the considerations that went into the final decision.

No response is required.

37. Will this project require any improvements to be made to any local roads?

The proposed Project will not require improvements to local roads.

38. Did Petitioner consider the potential impact of this development on Anguilla Brook or Fishers Island Sound?

Yes. Petitioner did consider the positive impact the proposed Project will have on Anguilla Brook. Approximately 40 acres of the 240 acres comprising the Elmridge Golf Course consists of intensively maintained turfgrass, with the remainder being made up of lightly maintained turf, forests, and wetlands. The practices on the

intensively maintained turfgrass include irrigation, as needed, and the application of a variety of chemicals, including fungicides, herbicides, and insecticides in accordance with manufacturer's recommended rates, as well as State and Federal regulations. Application of all control products is routinely carried out by licensed employees possessing either a CT Pesticide operator certificate or a CT Pesticide Supervisory certificate. Moreover, the fertilizer applied in the maintenance of a golf course can cause significant nutrient loading, including harmful nutrients such as phosphates and nitrates, which can harm receiving waters. The Project, as proposed, will not utilize any harmful chemicals or fertilizers.

In addition, the landowner holds a diversion permit from CT DEEP (Permit #DIVC-201809964) to divert/withdraw up to 40,000,000 gallons of water annually from Anguilla Brook, south of the West project parcel, for use in irrigation of the golf course. The five-year average withdrawal for 2015 through 2019 is 8,400,000 gallons/year.

The proposed solar facility will require 15 +/- acres, or 6% of the total land area of the property. However, the net decrease in water usage and control products will be much greater on a percentage basis, due to the fact that 9 of the current 27 golf holes will be de-commissioned as a result of the solar project and will revert to lightly maintained or unmaintained acreage. Thus, the actual decrease in water usage and control products will be closer to 33% of the totals listed. This reduction is expected to result in improved groundwater and surface water quality, as well as less of an impact to water quantity/volume at the source, Anguilla Brook.

The stormwater management system for the proposed Project is going through the CT DEEP stormwater general permit process and has been designed to meet all required water quality volume and treatment standards and guidelines for solar development projects. In addition, and as background, the portion of Anguilla Brook that runs through the West Project site is > 3 miles from Fisher's Island Sound, "as the stream flows." Due to the anticipated, improved quality of runoff from the site, stormwater management system and distance from Fisher's Island Sound, the Petitioner did not specifically study potential impacts to that water body, however, Petitioner would anticipate that any effects on that water body as a result of Petitioner's Project would be positive, if slight.

39. According to Petitioner's responses to the Council's first set of interrogatories, it appears that petitioner believes its site plans comply with CT DEEP's proposed changes to the General Permit, as reflected in Appendix I. Please explain how each provision of section (1) of the "design and construction requirements" in that document is satisfied by the site plans

- (1) Water quality volume for the site was determined based on the areas of the electrical equipment pads and gravel roads. Site topography on the west site consists of gentle slopes (2%-9%) with some undulating slopes (0.5%-2%) at the north end of the array area whereas the east site consists of gentle slopes along the east side with some isolated moderate slopes (9%-15%) along the west side of the array area.

Conditions (a) through (e) are met as follows:

- (a) The vegetated inter row space between the arrays is 13-feet exceeds the 12.5-foot width of the panel array row.
 - (b) Runoff within the array area will remain as sheet flow across the grass area beneath the panels. The west site will be graded to direct sheet flow towards the stormwater basin. Grading on the east site is minimal except for the reduction of the various golf course hills and construction of the stormwater basin. A diversion swale will be constructed to direct sheet flow from the southerly end of the array area towards the stormwater basin.
 - (c) Grading for the slope conditions between 5% - 9% will retain and direct sheet flow towards the stormwater basins. Grades on the east site are mostly unchanged so sheet flow will continue across existing grass areas. Stabilization of steeper slopes including slopes within the stormwater basins will be enhanced with the application of erosion control blankets as shown on the drawings.
 - (d) The panel arrays are elevated to allow the growth of grasses beneath the panels.
 - (e) The solar facilities are located outside of the 100-foot wetland buffer as shown on the project drawings.
- (2) The lowest vertical clearance from the lower edge of the panels to the ground below is approximately 3-feet.
 - (3) A pre-construction meeting will be held with all required representation prior to construction of this project.
 - (4) A qualified professional engineer will be retained to conduct sediment and erosion control compliance monitoring activities pursuant to the requirements of the DEEP Stormwater General Permit.

40. Please describe any meetings with CT DEEP stormwater personnel since the Petitioner's submission of its General Permit application on July 13, 2020, including any requests made for changes to the site plans.

Petitioner and Project civil engineer have not had any meetings with CT DEEP stormwater personnel since submission of the General Permit application on July 13, 2020. The Project's civil/design engineer has, however, reached out to CT DEEP staff to request a site visit. Such visit has not yet been scheduled.

The following information regarding communications between Petitioner and CTDEEP stormwater personnel was provided in Petitioner's response to the Council's Set 1 interrogatory #28. During the Petitioner's pre-application meeting the CTDEEP Stormwater Division personnel requested that the Dam Safety Division review the Project; said review determined that the proposed stormwater basin No. 2 dam would be assigned a hazard classification of "AA", which denotes that the structure has "negligible hazard potential." As such, Petitioner is not required to obtain a dam construction permit from the CTDEEP Dam Safety Program.

DEEP also suggested, with respect to timeframes for Site-grading, that grading and stabilization activities at the Site occur prior to the construction of the PV racking and panel installation for the Facility. It is anticipated that construction of the East Site Area will commence in the Fall of 2020, and construction of the West Site Area will follow, during active periods of the golf course (since golfing will permanently cease at the West Site at the close of the 2020 season).

41. Why are there no forebays or other pretreatment practices upstream of the stormwater basins?

Such pre-treatment measures are not necessary to treat runoff from the solar facilities since there is no loose sediment and debris within the array area that could become re-suspended within site runoff once the project receives a close-out from CT DEEP under the General Permit for construction. Surfaces within the facility include glass panel, a few concrete equipment pads and gravel access road around the perimeter of the facilities. Otherwise, land cover is primarily grass that will enhance filtration of runoff.

42. On Sheet LA-3, there is a note about 12 inches of topsoil being required for "planting beds." What is a "planting bed"? Does that phrase encompass areas under the arrays?

Planting beds are the areas where proposed landscaping will be installed (e.g. along the East Project area southern fence line, southeastern corner and south eastern

fence line). Planting beds will not be mowed areas and landscaping will be installed, mulched and allowed to fill in through growth. The 12-inch depth of topsoil is solely specified for the planting beds of the buffer plantings. Topsoil depth within the array areas will be maintained at 6 inches in areas that grading is necessary.

43. *Much of the array limits appear to go right to the edges of the 100-foot wetland buffers. Given that the wetlands delineations occurred in winter months, how confident is the Petitioner that those delineations were accurate? Please explain.*

The on-site wetland delineation was performed utilizing prescribed methodology during acceptable times of year. A second-order soil survey in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) publication Soil Survey Manual (1993) was completed at the subject site. The classification system of the National Cooperative Soil Survey was used in this investigation. Wetland determinations were completed based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land (e.g., a pond). Soil types were identified by observation of soil morphology (soil texture, color, structure, etc.).

44. *Given that Petitioner is proposing to do all clearing in the winter months, how will it guard against erosion? When will the vegetation be established? Will Petitioner be installing the solar array posts and racks before any grass cover has stabilized the site?*

Any significant areas of exposed soil which have been disturbed after October 15th shall be temporarily stabilized by one of the following methods until such time that permanent stabilization measures and seeding can be applied (typically after May 15th): 1. Installation of an anchored erosion control blanket; erosion control blankets will not be installed on snow of greater than one inch in depth or on frozen ground; 2. Application of a straw mulch at a rate of four (4) tons per acre; and/or 3. Application of wood chip mulch at a minimum depth of three inches (3") on slopes less than 2:1; all wood chip mulch will be removed prior to resuming site grading, if required.

45. *Has the Petitioner reviewed the comments submitted by the Stonington planning and zoning commission? If so, what is Petitioner's response to the issues raised therein, including items #1 through 11 in the submission by CLA Engineers?*

Yes. Petitioner has provided a response to the Town of Stonington regarding these comments. That response is included as Exhibit E.

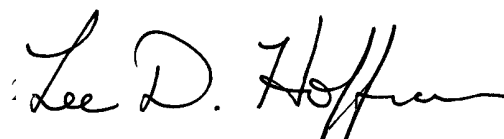
46. Has the Petitioner ever constructed a ground-mounted solar array in a groundwater protection overlay district? If so, please provide information on that project.

Yes, Petitioner has constructed (and is operating) two ground-mounted projects in Southington on sites containing CT DEEP Aquifer Protection Areas. Petitioner has not, however, constructed any ground-mounted projects in groundwater protection overlay districts, as designated under local zoning in Connecticut. Notwithstanding, the Petitioner is aware of the groundwater protection overlay district and has incorporated measures to ensure that the overlay is properly protected. Those measures can be found in Section 7.0 of the Petitioner's Stormwater Report, which was filed as Appendix L to the Petition. Moreover, as the Petitioner indicated in its response to the Town of Stonington with respect to this issue, Petitioner will ensure that no refueling occurs in the overlay, or that if refueling does occur in the overlay that appropriate spill prevention and remediation equipment is present at the site. See Exhibit E for Petitioner's response to the Town of Stonington.

47. Have the site plans been reviewed with the local fire marshal to ensure compliance with CT fire safety code, particularly chapter 11.12?

Yes. All Town officials have had the opportunity to review site plans. The Project's civil engineer used the same design standards for on-site roads and turnarounds that were used in Petitioner's, approved solar energy facility located at 35 Taugwonk Spur Rd., Stonington. Town officials reviewed and signed off on such design. These standards allow for adequate access by emergency vehicles. In addition, and as is standard practice in the development of solar energy facilities, Petitioner will coordinate with Town emergency response personnel. Appropriate personnel will have the opportunity to review all civil and electrical plans and before bringing the project online, Petitioner will offer to do a site walk with such staff to identify equipment, signage and system components.

Respectfully submitted,
GRE GRACRUX LLC

A handwritten signature in black ink, reading "Lee D. Hoffman". The signature is written in a cursive, flowing style with a large initial "L" and "H".

By:_____

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CERTIFICATION

I hereby certify that on this 20th day of August, 2020, the foregoing was delivered by electronic mail, in accordance with § 16-50j-12 of the Regulations of Connecticut State Agencies, to the following parties and intervenors of record:

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